Aim

To create a Pandas program that generates a DataFrame with random values and highlights negative numbers in red and positive numbers in black.

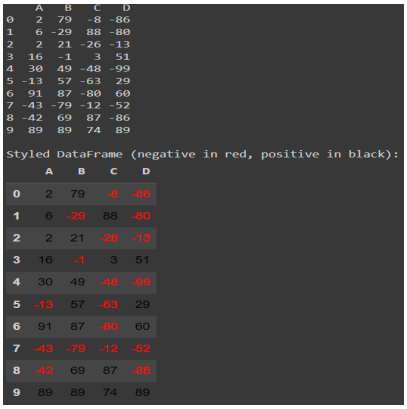
Algorithm

1. Import necessary libraries (Pandas and NumPy)
2. Create a DataFrame with 10 rows and 4 columns of random integers
3. Define a function to apply color formatting based on cell value
4. Apply the styling function to the DataFrame
5. Display the styled DataFrame

Code

```
import pandas as pd
import numpy as np

np.random.seed(42)
df = pd.DataFrame(np.random.randint(-100, 100, size=(10, 4)), columns=['A', 'B', 'C',
'D'])

def color_negative_red(val):
    color = 'red' if val < 0 else 'black'
    return f'color: {color}'

styled_df = df.style.applymap(color_negative_red)

print(df)
print("\nStyled DataFrame (negative in red, positive in black):")
styled_df
```

Output



Result

The program successfully creates a DataFrame with random values and applies conditional formatting to highlight negative numbers in red and positive numbers in black.